



**Kansas Department of Agriculture-Division of Water Resources  
Cooperating Technical Partners Program  
Mapping Activity Statement**

**Mapping Activity Statement No. 7 – Digital Flood Insurance Rate Map Production and Development of Updated Flood Data**

In accordance with the Cooperating Technical Partners (CTP) Partnership Agreement dated September 1, 1999, between Kansas Department of Agriculture-Division of Water Resources and the Federal Emergency Management Agency (FEMA), Mapping Activity Statement (MAS) No. 7 is as follows.

**SECTION 1—OBJECTIVE AND SCOPE**

The objective of the Flood Map Project documented in this MAS is to develop a Digital Flood Insurance Rate Map (DFIRM) and Flood Insurance Study (FIS) report for Leavenworth County. The DFIRM and FIS report will be produced in the FEMA Countywide Format.

This Flood Map project will be completed by the following:

- Kansas Department of Agriculture-Division of Water Resources;
- FEMA Flood Map Production Coordination Contractor (MCC).

The activities to be completed, and who they will be completed by, are summarized in Section 1 of this MAS.

The activities for this Flood Map Project, including required QA/QC (QA/QC) reviews, and the Mapping Partners that will complete them are summarized in the table below. The sections of this MAS that follow the table below describe the specific activities, responsible Mapping Partner(s), FEMA standards that must be met, and resultant map components.

The existing digital information for the communities of Lansing and the stream corridor for Stranger Creek will be incorporated into this DFIRM project. The city of Lansing has preliminary DFIRM information, and will be considered new information to be merged into the DFIRM product.

**Table 1-1. Summary of Project Activities and Assignments**

Activities	CTP	FEMA (MCC)
Activity 1 – Field Surveys and Reconnaissance	N/A	
Activity 2 – Topographic Data Development	N/A	
Activity 3 – Independent QA/QC Review of Topographic Data	N/A	
Activity 4 –Hydrologic Analyses	N/A	
Activity 5–Independent QA/QC Review of Hydrologic Analyses	N/A	
Activity 6 – Hydraulic Analyses	N/A	
Activity 7 – Independent QA/QC Review of Hydraulic Analyses	M/A	
Activity 8 – Floodplain Mapping (Detailed Riverine Analysis)	N/A	
Activity 8A – Floodplain Mapping (Redelineation Using Effective Flood Profiles and Updated Topographic Data)	N/A	

Activity 8B – Floodplain Mapping (Refinement or Creation of Zone A)	N/A	
Activity 9 – Independent QA/QC Review of Floodplain Mapping (Revised Areas)	N/A	
Activity 10 – Base Map Acquisition	X	
Activity 11 – DFIRM Production (Non-Revised Areas)	X	
Activity 11A – Independent QA/QC Review of DFIRM Production (Non-Revised Areas)		X
Activity 12 – DFIRM Production (Merge Revised and Non-Revised Information)	X	
Activity 12A – Application of DFIRM Graphic and Database Specifications		X
Activity 12B – Independent QA/QC Review of DFIRM Product Meeting FEMA Graphic and Database Specifications		N/A
Activity 13 – Preliminary DFIRM and FIS Report Distribution		X
Activity 14 – Post-Preliminary Processing		X

#### **Activity 1 - Field Surveys and Reconnaissance**

This activity is not applicable for digitization of existing flood hazard data.

#### **Activity 2 - Topographic Data Development**

This activity is not applicable for digitization of existing flood hazard data.

#### **Activity 3 - Independent QA/QC Review of Topographic Data**

This activity is not applicable for digitization of existing flood hazard data.

#### **Activity 4 – Hydrologic Analyses**

This activity is not applicable for digitization of existing flood hazard data.

#### **Activity 5 - Independent QA/QC Review of Hydrologic Analyses**

This activity is not applicable for digitization of existing flood hazard data.

#### **Activity 6 – Hydraulic Analyses**

This activity is not applicable for digitization of existing flood hazard data.

#### **Activity 7 - Independent QA/QC Review of Hydraulic Analyses**

This activity is not applicable for digitization of existing flood hazard data.

#### **Activity 8 - Floodplain Mapping (Detailed Riverine Analysis)**

This activity is not applicable for digitization of existing flood hazard data.

**Activity 8A - Floodplain Mapping (Redelineation of Detailed Floodplain Boundaries Using Updated Topographic Data)**

This activity is not applicable for digitization of existing flood hazard data.

**Activity 8B - Floodplain Mapping (Refinement or Creation of Zone A)**

This activity is not applicable for digitization of existing flood hazard data.

**Activity 9 - Independent QA/QC Review of Floodplain Mapping (Revised Areas)**

This activity is not applicable for digitization of existing flood hazard data.

**Activity 10 - Base Map Acquisition**

Responsible Mapping Partner: Kansas Department of Agriculture-Division of Water Resources

Scope: This is a required activity when Activities 8, 8A, 8B, and 11 are performed. This activity consists of obtaining the digital base map, DOQQ, for the project Kansas Department of Agriculture-Division of Water Resources shall provide the digital base map. The required activities are as follows:

- Obtain digital files (raster or vector) of the base map.
- Secure necessary permissions from the map source to allow FEMA's use and distribution of hardcopy and digital map products using the digital base map, free of charge.
- Certify that the digital data meets the minimum standards and specifications that FEMA requires for DFIRM production.
- Populate the DFIRM database with the information required by FEMA.

Standards: All work under Activity 10 shall be performed in accordance with the standards specified in Section 5 of this MAS.

Deliverables: In accordance with the TSDN format described in described in Appendix M of *Guidelines and Specifications for Flood Hazard Mapping Partners*, Kansas Department of Agriculture-Division of Water Resources shall make the following products available to FEMA:

- Written certification that the digital data meet the minimum standards and specifications and
- Documentation that FEMA can use the digital base map.

**Activity 11 – DFIRM Production (Non-Revised Areas)**

Responsible Mapping Partner: Kansas Department of Agriculture-Division of Water Resources

Scope: For all flooding sources except those segments specified in the Introduction to this SOW (that will have updated flood data developed under Activities 1 through 9), Kansas Department of Agriculture-Division of Water Resources shall convert the information shown on the effective FIRM and Flood Boundary Floodway Map (FBFM) panels for all incorporated and unincorporated areas of Leavenworth County to digital format in conformance with FEMA DFIRM specifications. Kansas Department of Agriculture-Division of Water Resources shall use the base map acquired under Activity 10 for the

conversion. The scope of Activity 11 covers the digitization of 22 FIRM panels and 18 FBFM panels. Kansas Department of Agriculture-Division of Water Resources also shall incorporate the results of Letters of Map Change (LOMCs) issued by FEMA since the date of the current effective FIRM for each affected community. Kansas Department of Agriculture-Division of Water Resources shall not digitize the flood theme for the flooding sources specified in the Introduction under Activity 11. Rather, Kansas Department of Agriculture-Division of Water Resources shall leave these as "holes" in the digital flood theme that will be filled in as part of Activity 12 using the digital flood data developed under Mapping Activity Statement No. 3.

**Standards:** All work under Activity 11 shall be performed in accordance with the standards specified in Section 5 of this MAS.

**Deliverables:** In accordance with the TSDN format described in described in Appendix M of *Guidelines and Specifications for Flood Hazard Mapping Partners*, Kansas Department of Agriculture-Division of Water Resources shall make the following products available to FEMA:

- Digital work maps showing the 1- and 0.2-percent-annual-chance floodplain boundary delineations, regulatory floodway boundary delineations, cross sections, BFEs, flood insurance risk zone labels, and all applicable base map features;
- DFIRM mapping files, prepared in accordance with the requirements in *Guidelines and Specifications for Flood Hazard Mapping Partners*;
- Metadata files describing the DFIRM data, including all required information shown in *Guidelines and Specifications for Flood Hazard Mapping Partners*;
- Complete set of plots of DFIRM panels showing all detailed flood hazard information at a suitable scale; and
- A Summary Report that describes and provides the results of all automated or manual QA/QC review steps taken during the preparation of the DFIRM, including a check that the road and floodplain relationship is maintained for all non-revised areas.

#### **Activity 11A – Independent QA/QC Review of DFIRM Production (Non-Revised Areas)**

**Responsible Mapping Partner:** MCC

**Scope:** MCC shall review the DFIRM panels submitted by MCC under Activity 11 to ensure that the new DFIRM panels accurately represent the information shown on the effective FIRMs and FBFMs for the area mapped. This work shall include, at a minimum, checking the following:

- Cross sections were properly located and oriented as shown on the FIRM or FBFM.
- BFEs are properly located and agree with the BFEs shown on the FIRM.
- Regulatory floodway widths agree with the widths shown on the FIRM or FBFM.
- The 1 and 0.2-percent-annual-chance floodplain boundaries agree with the floodplain boundaries shown on the FIRM and the contour lines, other topographic information, and planimetric information shown on the DFIRM base.
- For coastal studies, setup and run-up height elevations shown on the work map agree with those shown on the data table(s), and stillwater elevations are shown where coastal and riverine flooding studied in detail join.
- Zone designations are indicated properly.

**Standards:** All work under Activity 11A shall be performed in accordance with the standards specified in Section 5 of this MAS.

**Deliverables:** In accordance with the TSDN format described in described in Appendix M of *Guidelines and Specifications for Flood Hazard Mapping Partners*, MCC shall make the following products available to FEMA:

- A Summary Report that describes the findings of the QA/QC review noting any deficiencies and providing recommendations to resolve them or agreeing with the mapping results;
- Recommendations to resolve any problems that are identified during the independent QA/QC review; and
- An annotated copy of the DFIRM with all questions and/or concerns indicated, if necessary.

### **Activity 12 – DFIRM Production (Merging Revised and Non-Revised Information)**

**Responsible Mapping Partner:** Kansas Department of Agriculture-Division of Water Resources

**Scope:** Upon completion of the floodplain mapping activities (Activities 8, 8A, and/or 8B) for the revised flooding sources and the DFIRM production for non-revised areas (Activity 11), Kansas Department of Agriculture-Division of Water Resources shall merge the digital floodplain data into a single, updated Digital FIRM. This work is to include tie-in of flood hazard information for areas that were not studied as part of the Flood Map Project documented in this SOW. Kansas Department of Agriculture-Division of Water Resources also shall tie in the revised and non-revised Flood Profiles, floodplain boundaries, and regulatory floodway boundaries with contiguous communities that were not studied as part of this MAS. Kansas Department of Agriculture-Division of Water Resources shall coordinate with those Mapping Partners responsible for Activities 8, 8A, 8B, and 11, as necessary, to resolve any potential tie-in issues.

**Standards:** All work under Activity 12 shall be performed in accordance with the standards specified in Section 5 of this MAS.

**Deliverables:** In accordance with the TSDN format described in described in Appendix M of *Guidelines and Specifications for Flood Hazard Mapping Partners*, Kansas Department of Agriculture-Division of Water Resources shall make the following products available to FEMA:

- Digital work maps showing the 1- and 0.2-percent-annual-chance floodplain boundary delineations, regulatory floodway boundary delineations, cross sections, BFEs, flood insurance risk zone labels, and all applicable base map features;
- DFIRM mapping files, prepared in accordance with the requirements in *Guidelines and Specifications for Flood Hazard Mapping Partners*;
- Metadata files describing the DFIRM data, including all required information shown in *Guidelines and Specifications for Flood Hazard Mapping Partners*;
- Complete set of plots of DFIRM panels showing all detailed flood hazard information at a suitable scale; and
- A Summary Report that describes and provides the results of all automated or manual QA/QC review steps taken during the preparation of the DFIRM.

### **Activity 12A – DFIRM Production (Application of DFIRM Graphics and Database Specifications)**

**Responsible Mapping Partner:** MCC

**Scope:** MCC shall apply the final FEMA DFIRM graphic and database specifications to the DFIRM files produced under Activity 12. This work shall include adding all required annotation, line pattern, area

shading, and map collar information (e.g., map borders, title blocks, legends, notes to user). MCC shall coordinate with those Mapping Partners responsible for Activities 8, 8A, 8B, 11, and 12, as necessary, to resolve any problems that are identified during Activity 12A.

**Standards:** All work under Activity 12A shall be performed in accordance with the standards specified in Section 5 of this MAS.

**Deliverables:** In accordance with the TSDN format described in described in Appendix M of *Guidelines and Specifications for Flood Hazard Mapping Partners*, MCC shall make the following products available to FEMA:

- Digital work maps showing the 1- and 0.2-percent-annual-chance floodplain boundary delineations, regulatory floodway boundary delineations, cross sections, BFEs, flood insurance risk zone labels, and all applicable base map features;
- DFIRM mapping files, prepared in accordance with the requirements in *Guidelines and Specifications for Flood Hazard Mapping Partners*;
- Metadata files describing the DFIRM data, including all required information shown in *Guidelines and Specifications for Flood Hazard Mapping Partners*;
- Complete set of plots of DFIRM panels showing all detailed flood hazard information at a suitable scale; and
- A Summary Report that describes and provides the results of all automated or manual QA/QC review steps taken during the preparation of the DFIRM.

#### **Activity 12B – Independent QA/QC Review of DFIRM Product Meeting FEMA Graphics and Database Specifications**

This activity is not applicable for digitization of existing flood hazard data.

#### **Activity 13 - Preliminary DFIRM and FIS Report Distribution**

**Responsible Mapping Partners:** MCC

**Scope:** This activity consists of the final preparation, review and distribution of the Preliminary copies of the DFIRM and FIS report for community and public review and comment. The activities to be performed are summarized below.

**Preliminary Transmittal Letter Preparation.** The MCC shall prepare letters to transmit the Preliminary copies of the DFIRM and FIS report and related enclosures to the community, the State NFIP Coordinator, the FEMA Regional Office, and others as directed by FEMA.

**Final QA/QC Review of Preliminary DFIRM and FIS Report:** The MCC shall perform a final QA/QC review of the Preliminary DFIRM and FIS report, including all data tables, Flood Profiles, and other components of the FIS report. The QA/QC review procedures shall be consistent with the *Guidelines and Specifications for Flood Hazard Mapping Partners*.

**Discrepancy Resolution:** The MCC shall work with Kansas Department of Agriculture-Division of Water Resources and FEMA as appropriate to resolve discrepancies identified during the final QA/QC review.

*Distribution of Preliminary DFIRM and FIS Report:* The MCC shall distribute the Preliminary copies of the DFIRM and FIS report to the community, the State NFIP Coordinator, the FEMA Regional Office, and others as directed by FEMA.

*News Release Preparation:* The MCC shall prepare news release notifications of BFE changes and perform QA/QC reviews of the notices for accuracy and compliance with FEMA format requirements. The MCC shall file the notifications for later submittal to FEMA for review.

*Preliminary Summary of Map Actions (SOMA) Preparation:* The MCC shall prepare Preliminary SOMAs for all affected communities, if appropriate. The SOMA shall list pertinent information regarding Letters of Map Change that will be affected by the issuance of the DFIRM (i.e., superseded, incorporated, revalidated).

Standards: All work under Activity 13 shall be performed in accordance with the standards specified in Section 5 of this MAS.

Deliverables: In accordance with the TSDN format described in described in Appendix M of *Guidelines and Specifications for Flood Hazard Mapping Partners* and the requirements documented in Section 1 and Appendix A of the *FEMA Document Control Procedures Manual* MCC shall make the following products available to FEMA:

- Preliminary transmittal letters shall be prepared. These letters and any additional letters requested by FEMA shall be prepared in accordance with the current version of the *FEMA Document Control Procedures Manual*.
- Preliminary copies of the DFIRM and FIS report, including all updated data tables and Flood Profiles shall be mailed to the Chief Executive Officer (CEO) and floodplain administrator of each affected community, the State NFIP Coordinator, the FEMA Regional Office, and others as directed by FEMA.
- Preliminary SOMAs, prepared in accordance with FEMA requirements, shall be provided as appropriate.
- Revised DFIRM mapping files, prepared in accordance with the requirements in *Guidelines and Specifications for Flood Hazard Mapping Partners*, shall be provided on CD-ROM.
- Revised DFIRM database files, prepared in accordance with the requirements in *Guidelines and Specifications for Flood Hazard Mapping Partners*, shall be provided on CD-ROM.
- Revised metadata files describing the DFIRM data, including all required information shown in *Guidelines and Specifications for Flood Hazard Mapping Partners*, shall be provided on CD-ROM.
- A Summary Report that describes and provides the results of all automated or manual QA/QC review steps taken during the preparation of the DFIRM shall be provided.

#### **Activity 14 - Post-Preliminary Processing**

Responsible Mapping Partners: MCC

Scope: This activity consists of finalizing the DFIRM and FIS report after the Preliminary copies of the DFIRM and FIS report have been issued for public review and comment. The activities to be performed are summarized below.

*Initiation of Statutory 90-Day Appeal Period:* When required, upon completion of a 30-day community comment period and/or final coordination meeting with the affected communities, the MCC shall arrange

for and verify that the following activities are completed in accordance with the current version of the *FEMA Guidelines and Specifications for Flood Hazard Mapping Partners and Document Control Procedures Manual*.

- Proposed BFE determination letters are sent to the community CEOs and floodplain administrators.
- News release notifications of BFE changes are published in prominent newspapers with local circulation.
- The appropriate notices (Proposed Rules) are published in the *Federal Register*.

*Resolution of Appeals and Protests:* MCC shall support FEMA in reviewing and resolving appeals and protests received during the 90-day appeal period. For each appeal and protest, the following activities shall be conducted as appropriate:

- Initial processing and acknowledgment of submittal;
- Technical review of submittal;
- Preparation of letter(s) requesting additional supporting data;
- Performance of revised analyses; and
- Preparation of a draft resolution letter and revised DFIRM and FIS report materials for FEMA review.

The MCC shall mail all associated correspondence upon authorization by FEMA.

*Preparation of Special Correspondence:* MCC shall support FEMA in responding to comments not received within the 90-day appeal period (referred to as "special correspondence"), including drafting responses for FEMA review when appropriate and finalizing responses when requested by FEMA. The MCC also shall mail the final correspondence (and enclosures if appropriate) and distribute appropriate copies of the correspondence and enclosures upon receipt of authorization from FEMA.

*Revision of FIRM and FIS Report:* If necessary, the MCC shall work together to revise the DFIRM and FIS report at the direction of the FEMA Regional Project Officer and distribute Revised Preliminary copies of the DFIRM and FIS report.

*Final SOMA Preparation:* The MCC shall prepare Final SOMAs for the affected communities as appropriate.

*Processing of Letter of Final Determination:* The MCC shall work with FEMA to establish the effective date for the DFIRM and FIS report, and shall prepare a Letter of Final Determination (LFDs) for each affected community for FEMA review in accordance with the *FEMA Document Control Procedures Manual*. The MCC also shall mail the final signed LFDs and enclosures and distribute appropriate copies of the signed LFDs and enclosures upon receipt of authorization from FEMA.

*Processing of Final DFIRM and FIS Report for Printing:* The MCC shall prepare final reproduction materials for the DFIRM and FIS report and provide these materials to the FEMA Map Service Center for printing by the U.S. Government Printing Office. The MCC also shall prepare the appropriate paperwork to accompany the DFIRM and FIS report (including Print Processing Worksheet, Printing Requisition Forms, and Community Map Actions Form) and transmittal letters to the community CEOs.

*Revalidation Letter Processing.* The MCC shall prepare and distribute letters to the community CEOs and floodplain administrators to notify the affected communities about Letters of Map Change for which determinations will remain in effect after the DFIRM and FIS report become effective.



**Archiving Data:** The MCC shall ensure that technical and administrative support data are packaged in the FEMA required format and stored properly in the library archives until they are transmitted to the FEMA Engineering Study Data Package Facility.

**Standards:** All work under Activity 14 shall be performed in accordance with the standards specified in Section 5 of this MAS.

**Deliverables:** In accordance with the TSDN format described in described in Appendix M of *Guidelines and Specifications for Flood Hazard Mapping Partners* and the requirements documented in Section 1 and Appendix A of the FEMA *Document Control Procedures Manual* MCC shall make the following products available to FEMA:

- Documentation that the news releases were published in accordance with FEMA requirements;
- Documentation that the appropriate *Federal Register* notices (Proposed and Final Rules) were published in accordance with FEMA requirements;
- Draft and final Special Correspondence (and all associated enclosures, backup data, and other related information) for FEMA review and signature as appropriate;
- Draft and final Appeal and Protest acknowledgment, additional data, and resolution letters (and all associated enclosures, backup data, and other related information) for FEMA review and signature as appropriate;
- Draft and final LFDs (and all associated enclosures, backup data, and other related information) for FEMA review and signature;
- DFIRM negatives and final FIS report materials, including all updated data tables and Flood Profiles;
- Paperwork for the final DFIRM and FIS report materials;
- Transmittal letters for the printed DFIRM and FIS report;
- Letter of Map Change Revalidation Letters if appropriate; and
- Complete, organized archived technical and administrative support data

## **SECTION 2—Technical and Administrative Support Data Submittal**

The Project Team members for this Flood Map Project that have responsibilities for activities included in this Mapping Activity Statement shall comply with the data submittal requirements summarized below.

All supporting documentation for the activities in this Mapping Activity Statement shall be submitted in the TSDN format in accordance with Appendix M, Subsection M.2.1 of FEMA's *Guidelines and Specifications for Flood Hazard Mapping Partners*, dated February 2002. Appendix M is available for viewing or download on the FEMA Web site at [http://www.fema.gov/fhm/frm\\_gsam.pdf](http://www.fema.gov/fhm/frm_gsam.pdf). Table 2-1 indicates the sections of the TSDN that apply to each mapping activity.

If any issues arise that could affect the completion of an activity within the proposed scope or budget, the responsible Mapping Partner shall complete a Special Problem Report (SPR) as soon as possible after the issue is identified and submitted to FEMA. The SPR should describe the issue and propose possible resolutions. (For additional information on SPRs, refer to Appendix M, Subsection M.2.1.1 of *Guidelines and Specifications for Flood Hazard Mapping Partners*.)

Additionally, Kansas Department of Agriculture-Division of Water Resources shall collect and maintain a set of products for all Activities and shall compile a comprehensive TSDN for the entire project.

## **SECTION 3—PERIOD OF PERFORMANCE**

The mapping activities assigned to Kansas Department of Agriculture-Division of Water Resources in this MAS will be completed as specified in the Agreement Articles of the Cooperative Agreement. The Mapping Activities may be terminated at the option of FEMA or Kansas Department of Agriculture-Division of Water Resources in accordance with the provisions of the September CTP Partnership Agreement.

#### SECTION 4—FUNDING/COST-SHARING

Funds will be provided by FEMA through a cooperative agreement (No. 7) for the completion for this Flood Map Project. The cooperative agreement budget identifies the amount to be provided by each party. Kansas Department of Agriculture-Division of Water Resources shall provide any additional resources required to complete the assigned activities for this Flood Map Project.

**Table 2-1. Mapping Activities and Applicable TSDN Sections**

TSDN Section	K: Mapping Activities													
	1	2	3	4	5	6	7	8 8A 8B	9	10	11 11A	12 12A	13	14
<b>General Documentation</b>														
Special Problem Reports	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Telephone Conversation Reports	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Meeting Minutes/Reports	X	X	X	X	X	X	X	X	X	X	X	X	X	X
General Correspondence	X	X	X	X	X	X	X	X	X	X	X	X	X	X
<b>Engineering Analyses</b>														
Hydrologic Analyses	X			X	X	X	X	X	X					
Hydraulic Analyses	X			X	X	X	X	X	X					
Key to Cross-Section Labeling	X			X	X	X	X	X	X					
Key to Transect Labeling	X			X	X	X	X	X	X					
<b>Draft FIS Report</b>				X	X	X	X							
<b>Mapping Information</b>								X	X	X	X	X	X	X
<b>Miscellaneous Reference Information</b>	X	X	X	X	X	X	X	X	X	X	X	X	X	X

## **SECTION 5—STANDARDS**

The standards relevant to this Mapping Activity Statement are provided in Tables 5-1 and 5-2. Information on the correct volume, appendix, section, or subsection of FEMA's *Guidelines and Specifications for Flood Hazard Mapping Partners* (April 2003) to be referenced for each mapping activity are summarized in Table 5-2.

These Guidelines are available for viewing or download from the FEMA Flood Hazard Mapping Web site at [http://www.fema.gov/fhm/dl\\_cgs.shtm](http://www.fema.gov/fhm/dl_cgs.shtm).

**Table 5-1. Applicable Standards for Project Activities**

Applicable Standards	Activities													
	1	2	3	4, 4A	5, 5A	6	7	8, 8A, 8B	9	10	11, 11A	12, 12A	13	14
<i>Guidelines and Specifications for Flood Hazard Mapping Partners</i> , April 2003	X	X	X	X	X	X	X	X	X	X	X	X	X	X
American Congress on Surveying and Mapping (ACSM) procedures	X	X	X											
Global Positioning System (GPS) Surveys: National Geodetic Survey (NGS-58), "Guidelines for Establishing GPS-Derived Ellipsoid Heights," November 1997	X	X												
EM 1000-1-1000, <i>Photogrammetric Mapping</i> , March 31, 1993	X		X											
EM 1110-2-1003, <i>Hydrographic Surveys</i> , October 31, 1994	X													
Numerical Models Accepted by FEMA for NFIP Usage, April 2003				X	X	X	X							
<i>Content Standards for Digital Geospatial Metadata</i> (Federal Geographic Data Committee, 1998)								X	X	X	X	X	X	X
<i>Document Control Procedures Manual</i> , December 2000												X	X	X

**Table 5-2. Project Activities and Applicable Portions of FEMA Guidelines and Specifications**

Activity Number	Activity Description	Applicable Volume, Section/Subsection, and Appendix
1	Field Surveys and Reconnaissance	Volume 1, Sections 1.2, 1.3, 1.4 (specifically Subsection 1.4.2.1)
		Appendix A, Sections A.5, A.6, A.7, and A.8
		Appendices B, C, and M
2	Topographic Data Development	Volume 1, Section 1.4 (specifically Subsection 1.4.2.1)
		Appendix A, Sections A.2 and A.3
		Appendix M
3	Independent QA/QC Review of Topographic Data	Volume 1, Section 1.4 (specifically Subsections 1.4.1 and 1.4.2.1)
		Appendix A, Sections A.2, A.3, A.7 (specifically Subsection A.7.5), and A.8 (specifically Subsection A.8.6)
		Appendix M
4	Hydrologic Analyses	Volume 1, Section 1.4 (specifically Subsections 1.4.2.2 and 1.4.2.4)
		Appendix C, Sections C.1 and C.7
		Appendices E, F, G, H, and M
5	Independent QA/QC Review of Hydrologic Analyses	Volume 1, Section 1.4 (specifically Subsection 1.4.1)
		Appendix C, Section C.2
		Appendices E, F, G, H, and M
6	Hydraulic Analyses	Volume 1, Section 1.4 (specifically Subsections 1.4.2.2 and 1.4.2.4)
		Appendix C, Sections C.3 and C.7
		Appendices B, E, F, G, H, and M
7	Independent QA/QC Review of Hydraulic Analyses	Volume 1, Section 1.4 (specifically Subsection 1.4.1)
		Appendix A, Section A.4 (specifically Subsection A.4.7)

Activity Number	Activity Description	Applicable Volume Section/Subsection, and Appendix
		Appendix C, Section C.5
		Appendices B, E, F, G, H, and M
8	Floodplain Mapping (Detailed Riverine or Coastal Analysis)	Volume 1, Section 1.4 (specifically Subsection 1.4.2.3)
		Appendix C, Sections C. 4 and C.6
		Appendices K, L, and M
8A	Floodplain Mapping (Redelineation Using Effective Flood Profiles and Updated Topographic Data)	Volume 1, Section 1.4 (specifically Subsections 1.4.2.2 and 1.4.2.3)
		Appendices K, L, and M
8B	Floodplain Mapping (Refinement or Creation of Zone A)	Volume 1, Section 1.4 (specifically Subsection 1.4.2.3)
		Appendix C, Sections C.4 and C.6
		Appendices K, L, and M
9	Independent QA/QC Review of Floodplain Mapping (Revised Areas)	Volume 1, Section 1.4 (specifically Subsections 1.4.1 and 1.4.2.3)
		Appendix C, Sections C.4 and C.6
		Appendices D, K, L, and M
10	Base Map Acquisition and Preparation	Volume 1, Sections 1.3 (specifically Subsection 1.3.1.8) and 1.4 (specifically Subsection 1.4.3)
		Appendices A and B
11	DFIRM Production (Non-Revised Areas)	Volume 1, Section 1.4 (specifically Subsections 1.4.2.3 and 1.4.3.2)
		Appendices K, L, and M
11A	Independent QA/QC Review of DFIRM Production (Non-Revised Areas)	Volume 1, Section 1.4 (specifically Subsection 1.4.3)
		Appendices K, L, and M

<b>Activity Number</b>	<b>Activity Description</b>	<b>Guidelines Volume, Section/Subsection, and Appendix</b>
<b>12</b>	DFIRM Production (Merge Revised and Non-Revised Information)	Volume 1, Section 1.4 (specifically Subsections 1.4.2.3 and 1.4.3.3) ----- Appendices K and L
<b>12A</b>	Application of DFIRM Graphic and Database Specifications	Volume 1, Section 1.4 (specifically Subsection 1.4.3) ----- Appendices K and L ----- Appendices K, L, and M
<b>12B</b>	Independent QA/QC Review of DFIRM Product Meeting FEMA Graphics and Database Specifications	Volume 1, Section 1.4 (specifically Subsection 1.4.3) ----- Appendices K, L, and M
<b>13</b>	Preliminary DFIRM and FIS Report Distribution	Volume 1, Sections 1.4 (specifically Subsections 1.4.2 and 1.4.3) and 1.5 (specifically Subsection 1.5.1) ----- Appendices J, K, L, and M
<b>14</b>	Post-Preliminary Processing	Volume 1, Section 1.5 ----- Appendices J, K, L, and M

## **SECTION 6—SCHEDULE**

Monitoring Information for Contracted Studies (MICS) will be used to report progress for this Mapping Activity Statement. The initial schedule will be established when the MAS is signed, and the schedule progress will be updated no later than 30 days after the end of each quarter.

If changes to the schedule are required, the responsible Mapping Partner shall coordinate with FEMA and the other Mapping Partners in a timely manner.

## **SECTION 7—CERTIFICATIONS**

The following certifications apply to this MAS:

### **Activity 1 (Field Surveys and Reconnaissance)**

A Registered Professional Engineer or Licensed Land Surveyor will certify topographic data, in accordance with 44 CFR 65.5(c). Certification of topographic data by the American Society for Photogrammetry and Remote Sensing is also acceptable.

### **Activity 2 (Hydrologic Analyses), Activity 4 (Hydraulic Analyses), and Activity 6 (Floodplain Mapping— Detailed Riverine Analysis)**

- A Registered Professional Engineer or Licensed Land Surveyor will certify hydrologic and hydraulic analyses and data in accordance with 44 CFR 65.6(f).
- A Registered Professional Engineer or Licensed Land Surveyor will certify topographic information in accordance with 44 CFR 65.5(c).
- Any levee systems to be accredited will be certified in accordance with 44 CFR 65.10(e).

### **Activity 6 (Floodplain Mapping – Detailed Riverine Analysis), Activity 9 (DFIRM Production – Non-Revised Areas), Activity 10 (DFIRM Production – Merging Effective and Revised Information), and Activity 10A (Application of DFIRM Database and Graphic Specifications)**

The DFIRM metadata files will include a description of the horizontal and vertical accuracy of the DFIRM base map and floodplain information.

### **Activity 10 (Base Map Acquisition and Preparation)**

- A community official or responsible party will provide written certification that the digital data meet FEMA's minimum standards and specifications.
- The responsible Mapping Partner will provide documentation that the digital base map can be used by FEMA.

## **SECTION 8—TECHNICAL ASSISTANCE AND RESOURCES**

Kansas Department of Agriculture-Division of Water Resources may obtain copies of FEMA-issued Letters of Map Change, archived engineering backup data, and data collected as part of the Mapping Needs Assessment Process from the MCC.

General technical and programmatic information, such as FEMA 265, the Quick-2 computer program, and the MT-2 forms, can be downloaded from the FEMA Web site (<http://www.fema.gov/fhm>). Specific technical and programmatic support may be provided through the Kansas Department of Agriculture-Division of Water Resources; such assistance should be requested through the FEMA Project Officer specified in Section 11 of this MAS.



Kansas Department of Agriculture-Division of Water Resources also may consult with the FEMA Regional Project Officer to request support in the areas of selection of data sources, digital data accuracy standards, assessment of vertical data accuracy, data collection methods or subcontractors, and GIS-based engineering and modeling training.

#### **SECTION 9—CONTRACTORS**

Kansas Department of Agriculture-Division of Water Resources intends to use the services of a contractor for this Flood Map Project. If federal funds are used Kansas Department of Agriculture-Division of Water Resources shall ensure that the procurement for all contractors used for this Flood Map Project complies with the requirements of 44 CFR 13.36.

Part 13 may be downloaded in PDF or text format from the U.S. Government Printing Office Web site at [http://www.access.gpo.gov/nara/cfr/waisidx\\_01/44cfr13\\_01.html](http://www.access.gpo.gov/nara/cfr/waisidx_01/44cfr13_01.html).

#### **SECTION 10—FINANCIAL REPORTING**

Financial reporting requirements will be in accordance with Cooperative Agreement Articles V and VI.

#### **SECTION 11—POINTS OF CONTACT**

The points of contact for this Flood Map Project are Bob Franke, the FEMA Regional Project Officer; Julie Grauer, the Project Manager for Kansas Department of Agriculture-Division of Water Resources; or subsequent personnel of comparable experience who are appointed to fulfill these responsibilities. When necessary, the assistance of the Kansas Department of Agriculture-Division of Water Resources should be requested through the Project Officer, Julie Grauer.

#### **SECTION 12—PROJECT COORDINATION**


Throughout the project, all members of the Project Team will coordinate, as necessary, to ensure the products meet the technical and format specifications required and contain accurate, up-to-date information. Coordination activities shall include:

- Meetings, teleconferences, and video conferences with FEMA and other Project Team members;
- Telephone conversations with FEMA and other Project Team members on an ad hoc basis, as required;
- Updates to the MICS system, Mapping Needs Update Support System database, and other FEMA status information systems in accordance with requirements in Volumes 1 and 3 of *Guidelines and Specifications for Flood Hazard Mapping Partners*; and
- E-mail, facsimile transmissions, and letters, as required.

Each party has caused this MAS to be executed by its duly authorized representative.

  
Julie Grauer

Kansas Department of Agriculture-Division of Water Resources

  
Date

Robert G. Bissell

Robert G. Bissell, Director  
Federal Insurance and Mitigation Division  
Federal Emergency Management Agency

9/18/03

Date

William R. Blanton Jr.

William R. Blanton Jr., Project Officer  
Federal Emergency Management Agency

12/3/03

Date